

What is claimed is:

1           1. A centralized maintenance parts management system comprising:

2           a warehouse facility for storing, in a centralized manner, a maintenance part for a plurality  
3 of types of machines located at a plurality of plants;

4           a necessary parts management device for managing information about whether said  
5 maintenance part is necessary for said machines; and

6           a parts shipment management device for specifying a maintenance part to be shipped from  
7 said warehouse facility based on said management information in said necessary parts management  
8 device.

1           2. The centralized maintenance part management system as described in claim 1, further  
2 comprising an order management device for determining a maintenance part to be ordered and a  
3 quantity thereof based on inventory information of said maintenance part to be ordered in said  
4 warehouse facility or based on said management information in said necessary parts management  
5 device.

1           3. The centralized maintenance part management system as described in claim 2, wherein:  
2 said order management device allows input of a target value for a total price of said  
3 maintenance part stored in said warehouse facility; and

4           when determining said quantity of said maintenance part to be ordered, said quantity of said  
5 maintenance part to be ordered is reduced according to set conditions so that said total price of said  
6 maintenance part stored in said warehouse facility approaches said target value.

1           4. The centralized maintenance part management system as described in claim 2, wherein:

2           said order management device estimates a quantity of a maintenance part needed based on  
3   at least one of a change in a quantity of said maintenance part to be shipped from said warehouse  
4   facility, a change in a maintenance inspection of said machines, and a change in an operating status  
5   of said machines; and

6           said order management device determines said maintenance part to be ordered and said  
7   quantity thereof.

1           5. The centralized maintenance part management system as described in claim 1, further  
2   comprising an inspection period management device for storing information relating to periodic  
3   inspection periods for said machines, wherein

4           when there is a new machine to be managed in one of said plants, said inspection period  
5   management device uses said information relating to said periodic inspection periods for said  
6   machines to determine a periodic inspection period for said machine to be newly managed that is  
7   offset from said periodic inspection periods of said machines.

1           6. The centralized maintenance part management system as described in claim 1, wherein  
2   said necessary parts management device stores and maintains plant-by-plant inventory information  
3   indicating a quantity of said maintenance part stored in said plurality of plants and uses said  
4   plant-by-plant inventory information to evaluate whether said maintenance part is necessary.

1           7. The centralized maintenance part management system as described in claim 1, wherein,  
2   said parts shipment management device determines a plurality of maintenance parts to be shipped  
3   successively as a maintenance inspection progresses, when a single machine needs said  
4   maintenance parts to be shipped successively during said maintenance inspection.

1           8. The centralized maintenance part management system as described in claim 1, wherein  
2       said warehouse facility is an automated warehouse.

1           9. The centralized maintenance part management system as described in claim 3, wherein:  
2           said order management device estimates a quantity of a maintenance part needed based on  
3       at least one of a change in a quantity of said maintenance part to be shipped from said warehouse  
4       facility, a change in a maintenance inspection of said machines, and a change in an operating status  
5       of said machines; and

6           said order management device determines said maintenance part to be ordered and said  
7       quantity thereof.

1           10. The centralized maintenance part management system as described in claim 2, further  
2       comprising an inspection period management device for storing information relating to periodic  
3       inspection periods for said machines, wherein

4           when there is a new machine to be managed in one of said plants, said inspection period  
5       management device uses said information relating to said periodic inspection periods for said  
6       machines to determine a periodic inspection period for said machine to be newly managed that is  
7       offset from said periodic inspection periods of said machines.

1           11. The centralized maintenance part management system as described in claim 3, further  
2       comprising an inspection period management device for storing information relating to periodic  
3       inspection periods for said machines, wherein

4           when there is a new machine to be managed in one of said plants, said inspection period  
5       management device uses said information relating to said periodic inspection periods for said

6 machines to determine a periodic inspection period for said machine to be newly managed that is  
7 offset from said periodic inspection periods of said machines.

1 12. The centralized maintenance part management system as described in claim 4, further  
2 comprising an inspection period management device for storing information relating to periodic  
3 inspection periods for said machines, wherein

4 when there is a new machine to be managed in one of said plants, said inspection period  
5 management device uses said information relating to said periodic inspection periods for said  
6 machines to determine a periodic inspection period for said machine to be newly managed that is  
7 offset from said periodic inspection periods of said machines.

1 13. The centralized maintenance part management system as described in claim 2, wherein  
2 said necessary parts management device stores and maintains plant-by-plant inventory information  
3 indicating a quantity of said maintenance part stored in said plurality of plants and uses said  
4 plant-by-plant inventory information to evaluate whether said maintenance part is necessary.

1 14. The centralized maintenance part management system as described in claim 3, wherein  
2 said necessary parts management device stores and maintains plant-by-plant inventory information  
3 indicating a quantity of said maintenance part stored in said plurality of plants and uses said  
4 plant-by-plant inventory information to evaluate whether said maintenance part is necessary.

1 15. The centralized maintenance part management system as described in claim 4, wherein  
2 said necessary parts management device stores and maintains plant-by-plant inventory information  
3 indicating a quantity of said maintenance part stored in said plurality of plants and uses said

4 plant-by-plant inventory information to evaluate whether said maintenance part is necessary.

1 16. The centralized maintenance part management system as described in claim 5, wherein  
2 said necessary parts management device stores and maintains plant-by-plant inventory information  
3 indicating a quantity of said maintenance part stored in said plurality of plants and uses said  
4 plant-by-plant inventory information to evaluate whether said maintenance part is necessary.

1 17. The centralized maintenance part management system as described in claim 2,  
2 wherein, said parts shipment management device determines a plurality of maintenance parts to be  
3 shipped successively as a maintenance inspection progresses, when a single machine needs said  
4 maintenance parts to be shipped successively during said maintenance inspection.

1 18. The centralized maintenance part management system as described in claim 3,  
2 wherein, said parts shipment management device determines a plurality of maintenance parts to be  
3 shipped successively as a maintenance inspection progresses, when a single machine needs said  
4 maintenance parts to be shipped successively during said maintenance inspection.

1 19. The centralized maintenance part management system as described in claim 4,  
2 wherein, said parts shipment management device determines a plurality of maintenance parts to be  
3 shipped successively as said maintenance inspection progresses, when a single machine needs said  
4 maintenance parts to be shipped successively during said maintenance inspection.

1 20. The centralized maintenance part management system as described in claim 5,  
2 wherein, said parts shipment management device determines a plurality of maintenance parts to be

3 shipped successively as a maintenance inspection progresses, when a single machine needs said  
4 maintenance parts to be shipped successively during said maintenance inspection.

1 21. The centralized maintenance part management system as described in claim 6,  
2 wherein, said parts shipment management device determines a plurality of maintenance parts to be  
3 shipped successively as a maintenance inspection progresses, when a single machine needs said  
4 maintenance parts to be shipped successively during said maintenance inspection.

1 22. A method of using a centralized maintenance part management system comprising the  
2 steps of:

3 storing in a warehouse facility, in a centralized manner, a maintenance part for a plurality  
4 of types of machines located at a plurality of plants;

5 managing information about whether said maintenance part is necessary for said machines;  
6 and

7 specifying a maintenance part to be shipped from said warehouse facility based on said  
8 management information.

1 23. The method of using the centralized maintenance part management system according to  
2 claim 22, further comprising the step of:

3 determining a maintenance part to be ordered and a quantity thereof based on inventory  
4 information of said maintenance part to be ordered in said warehouse facility or based on said  
5 management information.

1 24. The method of using the centralized maintenance part management system according to

2 claim 23, further comprising the steps of:

3 inputting a target value for a total price of said maintenance part stored in said warehouse  
4 facility; and

5 determining said quantity of said maintenance part to be ordered, said quantity of said  
6 maintenance part to be ordered is reduced according to set conditions so that said total price of said  
7 maintenance part stored in said warehouse facility approaches said target value.

1 25. The method of using the centralized maintenance part management system according to  
2 claim 23, further comprising the steps of:

3 estimating a quantity of a maintenance part needed based on at least one of a change in a  
4 quantity of said maintenance part to be shipped from said warehouse facility, a change in a  
5 maintenance inspection of said machines, and a change in an operating status of said machines; and  
6 determining said maintenance part to be ordered and said quantity thereof.

1 26. The method of using the centralized maintenance part management system according to  
2 claim 22, further comprising the steps of:

3 storing information relating to periodic inspection periods for said machines; and

4 when there is a new machine to be managed in one of said plants, using said information  
5 relating to said periodic inspection periods for said machines to determine a periodic inspection  
6 period for said machine to be newly managed that is offset from said periodic inspection periods of  
7 said machines.

1 27. The method of using the centralized maintenance part management system according to  
2 claim 22, further comprising the steps of:

3 storing and maintaining plant-by-plant inventory information indicating a quantity of said  
4 maintenance part stored in said plurality of plants; and  
5 using said plant-by-plant inventory information to evaluate whether said maintenance part is  
6 necessary.

1 28. The method of using the centralized maintenance part management system according to  
2 claim 22, further comprising the step of:  
3 determining maintenance parts to be shipped successively as a maintenance inspection  
4 progresses, when a single machine needs a plurality of said maintenance parts to be shipped  
5 successively during said maintenance inspection.